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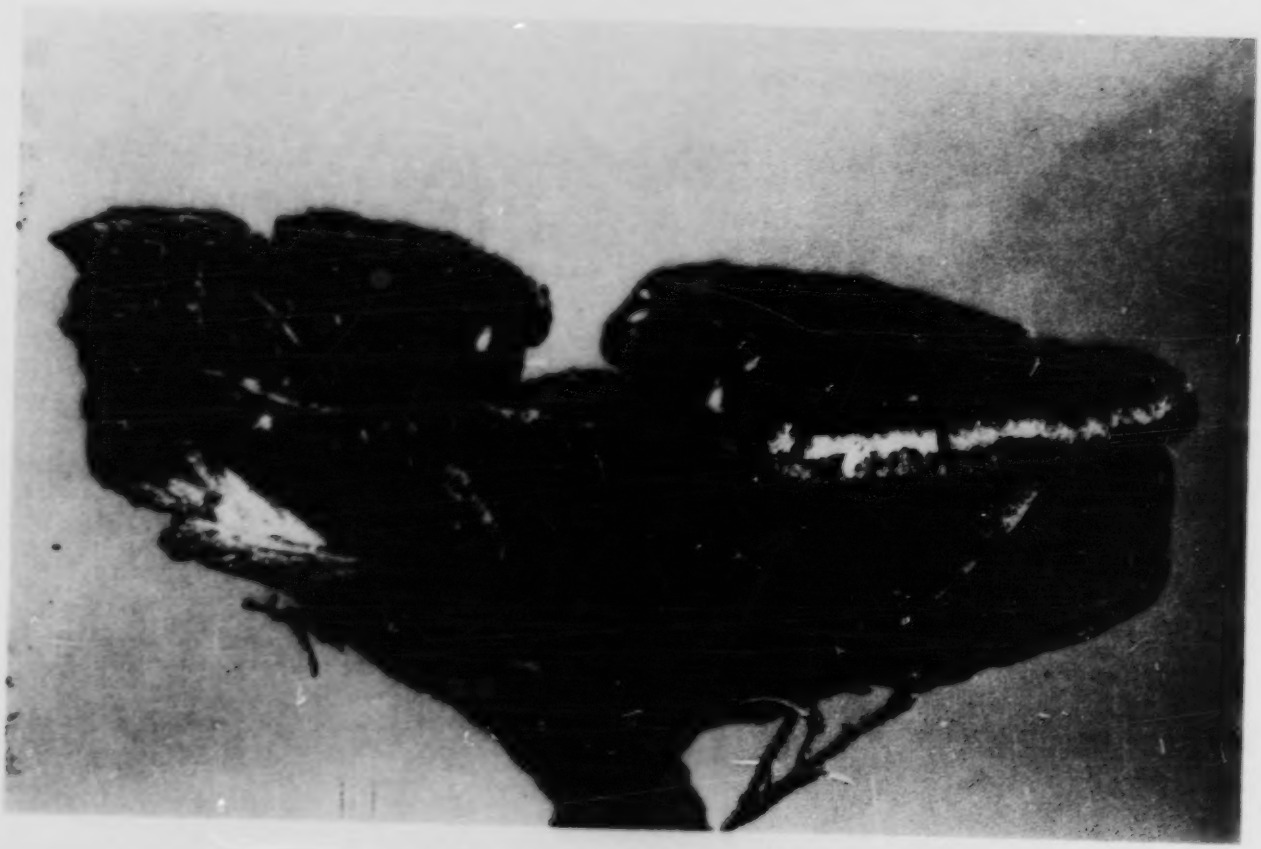
Index of Hosts and Associated Fungi Identified by the Forest Insect and Disease Survey in Ontario from 1967 to 1987. I. The Pines

D. T. Myren and C. N. Davis

Information Report O-X-395
Great Lakes Forestry Centre



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It is recognized that forested land must be managed in the best public interest, not only for the wood production essential to our economy, but also for the recreational purposes that are so important to our social well-being. This must be achieved in a manner that will maintain or improve the quality of the forest environment and preserve it for generations to come.

INDEX OF HOSTS AND ASSOCIATED FUNGI IDENTIFIED BY THE FOREST INSECT AND DISEASE SURVEY IN ONTARIO FROM 1967 TO 1987. I. THE PINES

D.T. MYREN AND C.N. DAVIS

GREAT LAKES FORESTRY CENTRE
FORESTRY CANADA
ONTARIO REGION
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ABSTRACT

This publication lists all fungi found on pine hosts from 1967 to 1987 by personnel of the Forest Insect and Disease Survey (FIDS) Unit at the Great Lakes Forestry Centre. The list is arranged first by host and then by organism. An index of common names of hosts and of diseases gives access to the appropriate pages in the lists to the reader not familiar with all Latin binomials. A comprehensive index of all Latin binomials, including frequently used synonyms, is included.

RÉSUMÉ

Les auteurs ont dressé la liste de tous les champignons observés sur des pins par le personnel de la section du Relevé des insectes et des maladies des arbres (RIMA) du Centre de foresterie des Grands Lacs de 1967 à 1987. La liste est divisée par hôte et par agent. La publication renferme un index des noms communs des hôtes et des maladies, qui permet au lecteur non familier avec tous les noms latins de trouver les pages voulues, ainsi qu'un index compréhensif de tous les noms latins, y compris les synonymes fréquemment employés.

ACKNOWLEDGMENTS

The authors wish to acknowledge the assistance provided by the Forest Insect and Disease Survey (FIDS) field staff in the preparation of this report. It is only through their detection of tree diseases and submission of well documented samples that the information presented here is made possible. Special thanks go to FIDS rangers Mr. R. Sajan and Mr. B. Smith for assistance in assembling and organizing this information. The cooperation of staff of the Ontario Ministry of Natural Resources (OMNR) in submitting samples and alerting our field staff to problem locations is appreciated.

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INTRODUCTION

The information presented in this index of fungi on pines was obtained from the Forest Insect and Disease Survey (FIDS) data bank maintained at the Petawawa National Forestry Institute. This data bank contains detailed records of each tree disease collection made by FIDS staff since 1967. Information from GLFC extension sample records not contained in the data bank is included. Most of the samples in our extension records were collected by staff of the Ontario Ministry of Natural Resources (OMNR).

This index has been prepared so as to ensure that some, at least, of the information in our data bank is available to the forestry community at large. Additional indices will be prepared over the next several years to cover all tree species native to Ontario; some of the more widely planted exotics will also be included.

The text consists of two major divisions. In the first the hosts are arranged in alphabetical order by their Latin binomials. In the second, the organisms are arranged in a similar fashion. These divisions are followed by an alphabetical list of the common names of both the hosts and the diseases, with the corresponding Latin binomials. By consulting this list for names that may be more familiar, the reader will gain access to the binomials in the main body of the text. An index of all Latin binomials, including anomorphs and synonyms, has also been included.

Many of the fungi presented are not true pathogens but have been found on the hosts as saprophytes. Others are known to be either weakly or vigorously pathogenic. To simplify attempts to recognize the category to which a fungus belongs, we have assigned a number according to the following system, which is used in the annual FIDS reports:

DISEASE RATING

1. Capable of causing serious injury to or death of living trees.

2. Capable of causing sporadic or local injury but not usually a threat to living trees.

3. Of minor importance and not known to have caused serious damage to trees.

4. Known as a saprophytic fungus.

M. Mycorrhizal.

Our assignment of an organism to a specific category is based on our field observations and laboratory experience.

Geographic locations refer to the provincial administrative regions as presented in Figure 1. We have elected to use a suitable abbreviation in designating the regions, such as NE for the Northeastern Region. In the text, the number of collections from a region follows the abbreviation and is enclosed within parentheses. It should be noted that these are the regions from which the fungus was reported; the fungus was not necessarily more abundant there, nor was it necessarily absent from other regions.

Many of the fungi and the diseases they cause do not have common names. For these we have constructed a name using the fungal genus, the type of disease, or the host, whichever we deemed most appropriate and least confusing. We do not necessarily nominate these as official common names but use them only to facilitate the use of this host index.

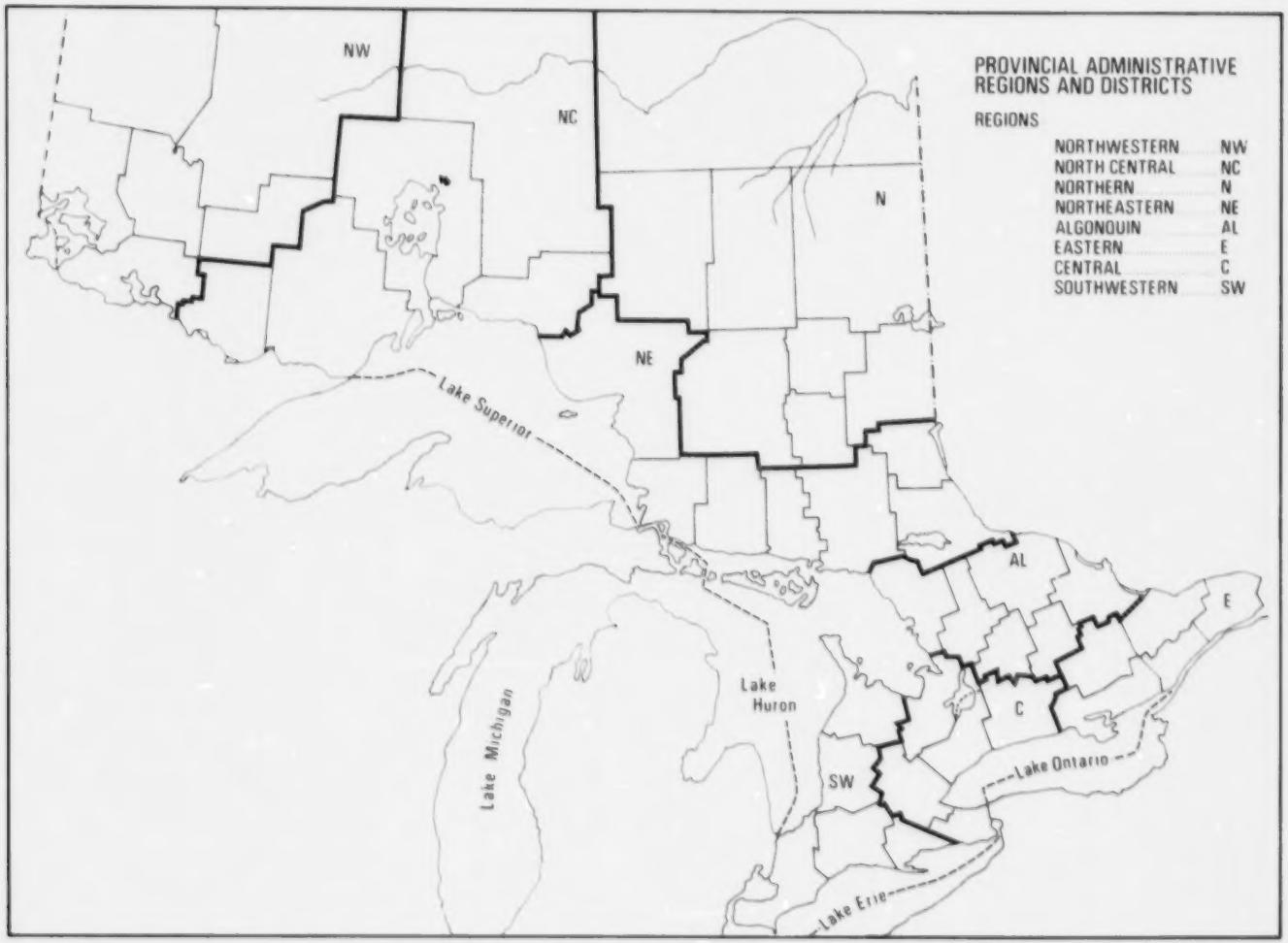

Figure 1. A map of the province of Ontario with the Ontario Ministry of Natural Resources provincial administrative regions bordered by darker lines and identified by the selected abbreviation.

HOST/FUNGUS LISTING

***Pinus banksiana* Lamb., jack pine**

Arceuthobium americanum Nutt. ex Engel.[1]: dwarf mistletoe
Disease Rating: 1
Loc.: NW (3)

Arceuthobium pusillum Peck[2]: eastern dwarf mistletoe
Disease Rating: 1
Loc.: NW (1), NC (2)

Armillaria mellea (Vahl:Fr.) Kummer[3]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NW (54), NC (109), N (146), NE (54), AL (10), E (6), C (3)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: NW (49), NC (176), N (124), NE (70), AL (6)

Ascocoryne sarcoides (Jacq.:Fr.) J.W. Groves & D. Wilson: pink stain
Syn.: *Coryne sarcoides* (Jacq.:Fr.) Tul.
Disease Rating: 3
Loc.: NC (2), N (1), NE (2)

Ascochyta sp.: needle spot
Disease Rating: 5
Loc.: NC (1)

Biatorella resinae (Ehrenb.:Fr.) Mudd: resin cup fungus
Anamorph: *Zythia resinae* (Ehrenb.:Fr.) P. Karsten
Disease Rating: 4
Loc.: N (1), NE (1)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold
Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel
Anamorph: *Botrytis cinerea* Pers.:Fr.
Disease Rating: 1
Loc.: SW (1)

Camarosporium sp.: camarosporium canker
Disease Rating: 3
Loc.: N (1), NE (1)

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1. *Arceuthobium americanum* and *A. pusillum* are parasitic phanerogams, not fungi.
2. ibid.
3. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus banksiana* Lamb., jack pine**

Capnodium sp.: sooty mold
Disease Rating: 3
Loc.: N (4), NE (2)

Cenangium acuum Cooke & Peck: twig blight
Disease Rating: 4
Loc.: NW (1), SW (1)

Cenangium atropurpureum Cash & Davidson: twig blight
Disease Rating: 3
Loc.: N (1), NE (1)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: NW (5), NC (6), N (6), NE (9), AL (6), C (1)

Cephalosporium sp.: cephalosporium wilt
Disease Rating: 4
Loc.: NW (1), NC (2), N (3), AL (1)

Ceratocystis sp.: blue stain
Disease Rating: 2
Loc.: NW (1), N (2), NE (1), AL (1)

Chaetomium sp.: chaetomium
Disease Rating: 4
Loc.: NW (1), NC (4), N (3), NE (2)

Chaetomium globosum Kunze:Fr.: olive-green mold
Disease Rating: 4
Loc.: NC (1)

Cladosporium sp.: needle spot
Disease Rating: 3
Loc.: NW (1), NC (1), SW (1)

Cladosporium variabile (Cooke) de Vries: needle blight
Disease Rating: 3
Loc.: SW (1)

Coleosporium sp.: pine needle rust
Disease Rating: 2
Loc.: NC (1)

Coleosporium asterum (Dietel) Sydow: pine needle rust
Syn.: *Coleosporium solidaginis* Thüm.
Disease Rating: 2
Loc.: NW (50), NC (51), N (88), NE (27), AL (2), E (12), C (6), SW (2)

***Pinus banksiana* Lamb., jack pine**

Coleosporium viburni Arthur: pine needle rust
Disease Rating: 2
Loc.: N (2)

Coniophora puteana (Schumacher:Fr.) P. Karsten: brown cubical rot
Disease Rating: 1
Loc.: N (1), NE (1)

Cronartium sp.: stem rust
Disease Rating: 1
Loc.: NW (10), NC (8), N (20), NE (4), AL (1)

Cronartium coleosporioides Arthur f. sp. *coleosporioides*: orange stalactiform blister rust
Disease Rating: 1
Loc.: NW (1), NC (12), N (5), NE (5)

Cronartium comandrae Peck: comandra blister rust
Disease Rating: 1
Loc.: NW (12), NC (8), N (3), E (1)

Cronartium comptoniae Arthur: sweet fern blister rust
Disease Rating: 1
Loc.: NW (25), NC (35), N (95), NE (46), AL (11), E (2), SW (1)

Cronartium quercuum (Berk.) Miyabe ex Shirai f. sp. *banksianae*: eastern gall rust
Disease Rating: 2
Loc.: NW (3), NC (2), N (4), NE (12), AL (1), SW (1)

Cryptoporus volvatus (Peck) Shear: trunk rot
Syn. *Polyporus volvatus* Peck
Disease Rating: 4
Loc.: E (2)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot
Disease Rating: 1
Loc.: NC (1)

Cytospora sp.: cytospora canker
Disease Rating: 3
Loc.: NC (1), N (3), NE (2)

Cytospora pini Desm.: cytospora canker
Disease Rating: 3
Loc.: NW (1), NC (2), N (2), NE (1)

Cytosporella sp.: shoot blight
Disease Rating: 3
Loc.: NC (1), NE (1)

***Pinus banksiana* Lamb., jack pine**

Cytosporina sp.: twig canker
Disease Rating: 3
Loc.: NC (2), N (1)

Dasyscyphus sp.: dasyscyphus canker
Disease Rating: 3
Loc.: NC (2)

Dasyscyphus acuum (Alb. & Schwein.) Sacc.: needle dasyscyphus
Disease Rating: 4
Loc.: NC (1)

Davisomycella sp.: tar spot needle cast
Syn.: *Hypodermella* sp.
Disease Rating: 2
Loc.: NC (2), NE (1)

Davisomycella ampla (J. Davis) Darker: tar spot needle cast
Syn.: *Hypodermella ampla* (J. Davis) Dearn.
Disease Rating: 2
Loc.: NW (32), NC (58), N (97), NE (64), AL (37), E (4)

Dendrophoma sp.: dendrophoma
Disease Rating: 4
Loc.: NC (2)

Dichomitus squalens (P. Karsten) Reid: red ray rot
Syn.: *Polyporus anceps* Peck
Disease Rating: 2
Loc.: NC (1)

Elytroderma deformans (Weir) Darker: needle cast
Disease Rating: 2
Loc.: NW (1), N (1)

Endocronartium sp.: western gall rust
Disease Rating: 2
Loc.: NC (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust
Syn.: *Peridermium harknessii* J.P. Moore
Disease Rating: 2
Loc.: NW (184), NC (107), N (113), NE (54), AL (14), E (4), C (1), SW (1)

Fomitopsis pinicola (Swartz:Fr.) P. Karsten: brown crumbly rot
Syn.: *Fomes pinicola* (Swartz:Fr.) Cooke
Disease Rating: 3
Loc.: NW (1), NC (1), N (2), NE (1)

***Pinus banksiana* Lamb., jack pine**

Gliocladium roseum (Link) Bainier: gliocladium stain
Disease Rating: 4
Loc.: NW (1), N (1)

Gloeophyllum odoratum (Fr.) Imaz.: brown cubical rot
Syn.: *Polyporus odoratus* Wolfen:Fr.
Syn.: *Trametes americana* Overh.
Disease Rating: 4
Loc.: AL (1)

Gloeophyllum sepiarium (Wulfen:Fr.) P. Karsten: brown cubical rot
Syn.: *Lenzites saepiaria* (Wulfen:Fr.) Fr.
Disease Rating: 2
Loc.: NE (1)

Hendersonia sp.: needle blight
Disease Rating: 3
Loc.: NW (1), N (4), NE (1), AL (3)

Hendersonia pinicola Wehm.: needle cast
Disease Rating: 3
Loc.: N (2), AL (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot
Syn.: *Fomes annosus* (Fr.) P. Karsten
Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers
Disease Rating: 1
Loc.: C (12), SW (2)

Hypodermella sp.: needle cast
Disease Rating: 3
Loc.: N (1)

Inonotus circinatus (Fr.) Gilbertson: circinatus root rot
Syn.: *Polyporus circinatus* Fr.
Disease Rating: 1
Loc.: N (1)

Junghuhnia collabens (Fr.) Ryv.: white pitted rot
Syn.: *Polyporus collabens* Fr.
Syn.: *Poria rixosa* (P. Karsten) P. Karsten
Disease Rating: 4
Loc.: NW (1)

Lachnellula sp.: lachnellula dieback
Disease Rating: 2
Loc.: NE (1)

***Pinus banksiana* Lamb., jack pine**

Lachnellula agassizii (Berk. & M.A. Curtis) Dennis: lachnellula dieback
Syn.: *Dasyscyphus agassizii* (Berk. & M.A. Curtis) Sacc.
Disease Rating: 3
Loc.: NC (2), N (1)

Lachnellula chrysophthalma (Pers.) P. Karsten: lachnellula dieback
Disease Rating: 3
Loc.: NC (1)

Leucostoma sp.: canker
Disease Rating: 3
Loc.: NW (1), NC (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Loc.: NW (8), NC (2), N (5), NE (1)

Lophodermella sp.: needle cast
Disease Rating: 3
Loc.: NE (2)

Lophodermella concolor (Dearn.) Darker: needle cast
Syn.: *Hypodermella concolor* (Dearn.) Darker
Disease Rating: 2
Loc.: NW (1), NC (1), N (1), NE (1), AL (2)

Lophodermium sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Loc.: NW (5), NC (23), N (38), NE (15), AL (3), C (2), SW (2)

Lophodermium nitens Darker: needle cast
Disease Rating: 2
Loc.: NC (1), N (5), NE (1), E (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: NW (5), NC (8), N (23), NE (6), AL (2), E (1)

Oligoporus sericeomollis (Romell) Pouzar: brown cubical rot
Syn.: *Polyporus sericeomollis* Romell
Syn.: *Poria sericeomollis* (Romell) Egel.
Disease Rating: 4
Loc.: NW (1)

Pestalotia sp.: needle and shoot blight
Disease Rating: 4
Loc.: E (1)

***Pinus banksiana* Lamb., jack pine**

Pezicula livida (Berk. & Broome) Rehm: pezicula dieback
Anamorph: *Cryptosporiopsis abietina* Petrak
Disease Rating: 4
Loc.: NW (1)

Phaeolus schweinitzii (Fr.) Pat.: brown cubical rot
Syn.: *Polyporus schweinitzii* Fr.
Disease Rating: 1
Loc.: NW (1)

Phellinus ferruginosus (Schrader:Fr.) Pat.: white spongy rot
Syn.: *Poria ferruginosa* (Schrader:Fr.) P. Karsten
Disease Rating: 4
Loc.: NW (1)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot
Syn.: *Fomes pini* (Thore:Fr.) P. Karsten
Disease Rating: 1
Loc.: NW (2), NC (2), NE (1)

Phellinus viticola (Schwein.) Donk: grape white rot
Syn.: *Fomes viticola* (Schwein.) Lowe
Disease Rating: 4
Loc.: NW (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight
Disease Rating: 3
Loc.: NW (1), NC (5), N (1), E (1)

Poria subacida (Peck) Sacc.: white stringy rot
Disease Rating: 1
Loc.: NW (1)

Retinocyclus sp.: retinocyclus dieback
Disease Rating: 3
Loc.: N (1)

Rhizina undulata Fr.: tea pot fungus
Syn.: *Rhizina inflata* P. Karsten
Disease Rating: 3
Loc.: NC (3)

Rosellinia sp.: felt blight
Disease Rating: 2
Loc.: NC (1)

Rosellinia thelena (Fr.) Rabenh.: pine bark rosellinia
Disease Rating: 4
Loc.: NC (1), N (1), NE (1)

***Pinus banksiana* Lamb., jack pine**

Scoleconectria cucurbitula (Tode:Fr.) C. Booth: canker & dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel
Disease Rating: 3
Loc.: NW (7), NC (26), N (20), NE (3), AL (2), E (1), C (1)

Scytinostroma galactinum (Fr.) Donk: yellow stringy rot
Syn.: *Corticium galactinum* (Fr.) Burt
Disease Rating: 2
Loc.: NW (1), NE (1)

Sistotrema brinkmannii (Bresad.) John Eriksson: white stringy rot
Syn.: *Trechispora brinkmannii* (Bresad.) Rogers and Jacks.
Disease Rating: 4
Loc.: NE (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: NC (1), AL (1), C (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel
Disease Rating: 2
Loc.: N (1), NE (1), AL (1), E (1)

Thelephora terrestris Ehrh.:Fr.: smothering disease
Disease Rating: 4M
Loc.: N (1), SW (1)

Therrya fuckelii (Rehm) Kujala: therrya canker
Disease Rating: 3
Loc.: NW (1)

Trichaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot
Syn.: *Polyporus abietinus* Pers.:Fr.
Disease Rating: 4
Loc.: NW (2), NE (1)

Tympanis sp.: tympanis canker
Disease Rating: 3
Loc.: NW (2), NC (1), N (4), NE (2)

Tympanis hypopodia Nyl.: tympanis canker
Syn.: *Tympanis piceina* Groves
Disease Rating: 3
Loc.: N (4), NE (1)

***Pinus banksiana* Lamb., jack pine**

Tympanis truncatula (Pers.:Fr.) Rehm: tympanis dieback
Syn.: *Tympanis pinastri* Tul.
Disease Rating: 3
Loc.: N (1)

Valsa sp.: cytospora canker
Disease Rating: 3
Loc.: NC (1), NE (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker
Disease Rating: 3
Loc.: NW (3), NC (2), N (9)

Wallrothiella arceuthobii (Peck) Sacc.: flower blight
Disease Rating: 2
Loc.: NW (2) (on *Arceuthobium americanum* Nutt. ex Engel.)

***Pinus contorta* Dougl., lodgepole pine**

Armillaria mellea (Vahl:Fr.) Kummer[4]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NC (2)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: NC (5)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: NC (5)

Coleosporium asterum (Dietel) Sydow: pine needle rust
Syn.: *Coleosporium solidaginis* Thüm.
Disease Rating: 2
Loc.: NC (7)

Cronartium sp.: stem rust
Disease Rating: 1
Loc.: NC (5), N (1)

Cronartium comptoniae Arthur: sweet fern blister rust
Disease Rating: 1
Loc.: NC (4), N (2)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust
Syn.: *Peridermium harknessii* J.P. Moore
Disease Rating: 2
Loc.: NC (2), N (1)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum
Disease Rating: 3
Loc.: C (1)

Hormodendrum sp.: wood stain
Disease Rating: 4
Loc.: C (1)

Lachnellula chrysophthalma (Pers.) P. Karsten: lachnellula dieback
Disease Rating: 3
Loc.: NC (1)

---

4. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus contorta* Dougl., lodgepole pine**

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: SW (1)

Mycosphaerella pini Rostrup: red band disease
Syn.: *Scirrhia pini* Funk and Parker
Anamorph: *Dothistroma septospora* (Dorog.) Morelet var. *septospora*
Disease Rating: 2
Loc.: SW (1)

Pestalotia sp.: needle and shoot blight
Disease Rating: 4
Loc.: C (1)

Scleroconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel
Disease Rating: 3
Loc.: NC (1)

***Pinus mugo* Turra var. *mughus* Zenari, mugho pine**

Armillaria mellea (Vahl:Fr.) Kummer[5]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NC (1)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: E (1)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: C (1)

Cronartium comandrae Peck: comandra blister rust
Disease Rating: 1
Loc.: AL (1)

Cyclaneusma sp.: needle cast
Syn.: *Naemacyclus* sp.
Disease Rating: 2
Loc.: SW (2)

Cyclaneusma minus (Butin) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus minor* Butin
Disease Rating: 2
Loc.: SW (1)

Cyclaneusma niveum (Pers.:Fr.) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus niveus* (Pers.:Fr.) Fuckel ex Sacc.
Disease Rating: 3
Loc.: E (1), SW (1)

Cytospora pini Desm.: cytospora canker
Disease Rating: 3
Loc.: NE (1)

Cytosporella sp.: shoot blight
Disease Rating: 3
Loc.: NW (1)

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5. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus mugo* Turra var. *mughus* Zenari, mugho pine**

Mycosphaerella dearnessii Barr: brown spot needle blight
Syn.: *Scirrhia acicola* (Dearn.) Siggers
Anamorph: *Lecanosticta acicola* (Thüm.) H. Sydow
Disease Rating: 2
Loc.: AL (1), E (1), SW (5)

Pestalotia sp.
Disease Rating: 4
Loc.: C (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight
Disease Rating: 3
Loc.: C (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel
Disease Rating: 2
Loc.: NW (1), SW (2)

***Pinus nigra* Arnold, Austrian pine**

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: NE (2), AL (4), E (1)

Cenangium acuum Cooke & Peck: twig blight
Disease Rating: 4
Loc.: C (1)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: E (1), C (3)

Coniochaeta sp.: coniochaeta
Disease Rating: 4
Loc.: C (1)

Cytospora sp.: cytospora canker
Disease Rating: 3
Loc.: NE (1)

Cytospora pini Desm.: cytospora canker
Disease Rating: 3
Loc.: C (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust
Syn.: *Peridermium harknessii* J.P. Moore
Disease Rating: 2
Loc.: NW (1), SW (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Loc.: AL (1)

Lophodermium sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Loc.: AL (1), E (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: AL (1), E (1), C (1)

***Pinus nigra* Arnold, Austrian pine**

Mycosphaerella dearnessii Barr: brown spot needle cast
Syn.: *Scirrhia acicola* (Dearn.) Siggers
Anamorph: *Lecanosticta acicola* (Thüm.) H. Sydow
Disease Rating: 2
Loc.: C (1), SW (2)

Mycosphaerella pini Rostrup: red band disease
Syn.: *Scirrhia pini* Funk & Parker
Anamorph: *Dothistroma septospora* (Dorog.) Morelet var. *septospora*
Disease Rating: 2
Loc.: E (3), C (10), SW (5)

Pestalotia sp.: needle and shoot blight
Disease Rating: 4
Loc.: C (1), SW (1)

Septoria sp.: needle spot
Disease Rating: 3
Loc.: N (1), AL (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: AL (1), E (9), C (14), SW (11)

Tympanis confusa Nyl.: tympanis canker
Disease Rating: 3
Loc.: C (1)

***Pinus ponderosa* Laws., ponderosa pine**

Cronartium sp.: stem rust
Disease Rating: 1
Loc.: NE (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Loc.: NE (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: C (1)

***Pinus resinosa* Ait., red pine**

Armillaria mellea (Vahl:Fr.) Kummer[6]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NW (16), NC (8), N (8), NE (40), AL (32), E (12), C (47), SW (4)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: NW (14), NC (31), N (75), NE (105), AL (77), C (1)

Ascocoryne sarcoides (Jacq.:Fr.) J.W. Groves & D. Wilson: pink stain
Syn.: *Coryne sarcoides* (Jacq.:Fr.) Tul.
Disease Rating: 3
Loc.: AL (2), E (1)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold
Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel
Anamorph: *Botrytis cinerea* Pers.:Fr.
Disease Rating: 1
Loc.: N (1), NE (3), C (1)

Caliciopsis pinea Peck: caliciopsis canker
Disease Rating: 3
Loc.: SW (1)

Cenangium acuum Cooke & Peck: twig blight
Disease Rating: 4
Loc.: NC (1), NE (1), C (1)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: NW (4), NC (4), NE (1), AL (8), E (15), C (7), SW (2)

Cephalosporium sp.: cephalosporium wilt
Disease Rating: 4
Loc.: NW (1), AL (2), E (1), C (4)

Ceratocystis sp.: blue stain
Disease Rating: 2
Loc.: NE (1), C (1), SW (1)

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6. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus resinosa* Ait., red pine**

Coccomyces strobi J. Reid & Cain: coccomyces canker
Disease Rating: 2
Loc.: NE (1), E (2)

Coleosporium asterum (Dietel) Sydow: pine needle rust
Syn.: *Coleosporium solidaginis* Thüm.
Disease Rating: 2
Loc.: NW (9), NC (1), NE (5), AL (33), E (43), C (38), SW (24)

Coltricia cinnamomea (Pers.) Murrill: shiny cinnamon polypore
Syn.: *Polyporus cinnamomeus* Pers.
Disease Rating: 4
Loc.: NE (1)

Coltricia perennis (Fr.) Murrill: perennis polypore
Syn.: *Polyporus perennis* L.:Fr.
Disease Rating: 4
Loc.: SW (1)

Coniochaeta sp.: coniochaeta
Disease Rating: 4
Loc.: NE (1)

Coriolus versicolor (L.:Fr.) Quélet: turkeytail
Syn.: *Polyporus versicolor* L.:Fr.
Disease Rating: 4
Loc.: SW (1)

Corticium sp.: white spongy rot
Disease Rating: 2
Loc.: AL (1)

Cryptoporus volvatus (Peck) Shear: trunk rot
Syn.: *Polyporus volvatus* Peck
Disease Rating: 4
Loc.: AL (2), E (4), C (1)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot
Disease Rating: 1
Loc.: E (1)

Cytospora sp.: cytospora canker
Disease Rating: 3
Loc.: NW (2), NC (1), N (3), NE (2), AL (3), E (5), C (1)

Cytospora pini Desm.: cytospora canker
Disease Rating: 3
Loc.: NE (1), AL (2)

***Pinus resinosa* Ait., red pine**

Cytosporella sp.: shoot blight
Disease Rating: 3
Loc.: NC (1), N (1), E (1)

Cytosporina sp.: twig canker
Disease Rating: 3
Loc.: AL (4), SW (1)

Dermea sp.: dermea canker
Disease Rating: 3
Loc.: AL (1)

Dothiorella sp.: dothiorella canker and dieback
Disease Rating: 3
Loc.: NW (1)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum
Disease Rating: 3
Loc.: C (1)

Ganoderma tsugae Murrill: white spongy rot
Disease Rating: 2
Loc.: C (1)

Gelatinosporium sp.: stem canker
Disease Rating: 3
Loc.: NE (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot
Syn.: *Fomes annosus* (Fr.) P. Karsten
Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers
Disease Rating: 1
Loc.: E (17), C (27), SW (13)

Hormiscium sp.: hormiscium
Disease Rating: 4
Loc.: NW (2), NC (2), N (2), NE (7)

Hydnellum aurantiacum (Batsch:Fr.) P. Karsten: hydnellum
Syn.: *Hydnum aurantiacum* Alb. & Schwein.
Disease Rating: 4
Loc.: AL (1)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot
Syn.: *Polyporus tomentosus* Fr.
Disease Rating: 1
Loc.: SW (2)

***Pinus resinosa* Ait., red pine**

Leucostoma sp.: canker
Disease Rating: 3
Loc.: N (1), E (2)

Leucostoma kunzei (Fr.) Munk: cytospora canker
Anamorph: *Cytospora kunzei* Sacc.
Disease Rating: 2
Loc.: AL (1)

Lophium sp.: mussel shell fungus
Disease Rating: 4
Loc.: N (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Loc.: NW (3), NC (1), N (1), NE (3), AL (3)

Lophodermium sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Loc.: NW (7), NC (4), N (6), NE (56), AL (26), E (20), C (10), SW (2)

Lophodermium nitens Darker: needle cast
Disease Rating: 2
Loc.: NC (2), N (1), E (1), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: NW (9), NC (8), N (7), NE (16), AL (28), E (1), C (6), SW (2)

Lophodermium seditiosum Minter, Staley & Millar: needle cast
Anamorph: *Leptostroma austriacum* Oud.
Anamorph: *Leptostroma rostrupii* Minter
Disease Rating: 1
Loc.: N (1), NE (2), E (5)

Nectria sp.: nectria canker
Disease Rating: 3
Loc.: NC (1)

Oligoporus guttulatus (Peck) Gilbertson & Ryv.: brown cubical rot
Syn.: *Polyporus guttulatus* (Peck)
Syn.: *Tyromyces guttulatus* (Peck) Murrill
Disease Rating: 4
Loc.: SW (1)

***Pinus resinosa* Ait., red pine**

Peniophora sp.: sap rot
Disease Rating: 4
Loc.: AL (1)

Pestalotia sp.: needle & shoot blight
Disease Rating: 4
Loc.: NW (2), N (1), C (3)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot
Syn.: *Fomes pini* (Thore:Fr.) P. Karsten
Disease Rating: 1
Loc.: NC (1), NE (2), C (1)

Phoma sp.: needle blight
Disease Rating: 3
Loc.: NW (6), NC (1), NE (2), E (1), C (1)

Phomopsis sp.: phomopsis canker
Disease Rating: 3
Loc.: NW (1), N (1), NE (2)

Rhizina undulata Fr.: tea pot fungus
Syn.: *Rhizina inflata* P. Karsten
Disease Rating: 3
Loc.: C (2)

Scoleconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel
Disease Rating: 3
Loc.: NW (1), NC (6), N (4), NE (6), AL (9), E (9), C (2), SW (1)

Scytinostroma galactinum (Fr.) Donk: yellow stringy rot
Syn.: *Corticium galactinum* (Fr.) Burt
Disease Rating: 2
Loc.: AL (1)

Sirococcus conigenus (DC.) P. Cannon & Minter: shoot blight
Syn.: *Sirococcus strobilinus* Preuss
Disease Rating: 2
Loc.: NW (40), NC (20), N (5), NE (23), AL (2)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: NW (3), NC (2), NE (2), AL (4), E (7), C (8), SW (7)

***Pinus resinosa* Ait., red pine**

Sporonema sp.: needle spot
Disease Rating: 4
Loc.: E (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel
Disease Rating: 2
Loc.: NW (1), N (3), NE (12), AL (4), E (5)

Thelephora terrestris Ehrh.:Fr.: smothering disease
Disease Rating: 4M
Loc.: AL (1), E (2)

Therrya fuckelii (Rehm) Kujala: therrya canker
Disease Rating: 3
Loc.: AL (1), E (4), C (4)

Trichaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot
Syn.: *Polyporus abietinus* Pers.:Fr.
Disease Rating: 4
Loc.: E (1), C (1)

Tympanis sp.: tympanis canker
Disease Rating: 3
Loc.: NW (1), NC (2), N (1), NE (2), AL (12), E (6), C (2)

Valsa sp.: cytospora canker
Disease Rating: 3
Loc.: NW (2), NE (2), AL (2), E (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker
Disease Rating: 3
Loc.: NW (3), NC (6), N (1), NE (6), AL (1), E (2)

Verticicladiella sp.: black root stain
Disease Rating: 1
Loc.: E (2)

Verticillium sp.: seedling root rot
Disease Rating: 3
Loc.: NE (1), C (1)

***Pinus strobus* L., eastern white pine**

Armillaria mellea (Vahl:Fr.) Kummer[7]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NC (1), N (5), NE (9), AL (19), E (2), C (3), SW (4)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: NC (4), N (2), NE (7)

Biatorella resinae (Ehrenb.:Fr.) Mudd: resin cup fungus
Anamorph: *Zythia resinae* (Ehrenb.:Fr.) P. Karsten
Disease Rating: 4
Loc.: NE (1)

Bifusella sp.: needle cast
Disease Rating: 3
Loc.: AL (1)

Bifusella linearis (Peck) Höhnel: needle cast
Syn.: *Hypoderma lineare* (Peck) Thüm.
Disease Rating: 3
Loc.: NE (2)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold
Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel
Anamorph: *Botrytis cinerea* Pers.:Fr.
Disease Rating: 1
Loc.: E (1)

Caliciopsis pinea Peck: caliciopsis canker
Disease Rating: 3
Loc.: C (1)

Camarosporium sp.: camarosporium canker
Disease Rating: 3
Loc.: NE (1)

Capnodium sp.: sooty mold
Disease Rating: 3
Loc.: AL (1), E (1), C (1)

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***Pinus strobus* L., eastern white pine**

Capnodium pini Berk. & M.A. Curtis: sooty mold
Disease Rating: 3
Loc.: E (1)

Cenangium acuum Cooke & Peck: twig blight
Disease Rating: 4
Loc.: NE (3), C (3), SW (1)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: NC (1), NE (1), E (1), C (2), SW (1)

Cephalosporium sp.: cephalosporium wilt
Disease Rating: 4
Loc.: E (2), SW (1)

Coccomyces strobi J. Reid & Cain: coccomyces canker
Disease Rating: 2
Loc.: NE (2), E (1), C (1), SW (3)

Cronartium ribicola J.C. Fischer: white pine blister rust
Disease Rating: 1
Loc.: NW (25), NC (22), N (29), NE (117), AL (53), E (36), C (32), SW (25)

Cytospora sp.: cytospora canker
Disease Rating: 3
Loc.: NE (4), AL (1), E (2), C (2), SW (4)

Cytospora pini Desm.: cytospora canker
Disease Rating: 3
Loc.: NC (1), NE (4), AL (2), E (1), SW (3)

Cytosporina sp.: twig canker
Disease Rating: 3
Loc.: NE (1)

Dermea balsamea (Peck) Seaver: dermea twig canker
Syn.: *Gelatinosporium abietinum* Peck
Anamorph: *Foveostroma abietinum* (Peck) DiCosmo
Disease Rating: 3
Loc.: NE (4), AL (1)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum
Disease Rating: 3
Loc.: NE (4), AL (1), SW (1)

***Pinus strobus* L., eastern white pine**

Fusicoccum sp.: needle blight
Disease Rating: 3
Loc.: SW (2)

Gelatinosporium sp.: stem canker
Disease Rating: 3
Loc.: NW (1), NE (1)

Gloeophyllum sepiarium (Wulfen:Fr.) P. Karsten: brown cubical rot
Syn.: *Lenzites saepiaria* (Wulfen:Fr.) Fr.
Disease Rating: 2
Loc.: E (1)

Hendersonia sp.: needle blight
Disease Rating: 3
Loc.: NE (1)

Hendersonia pinicola Wehm.: needle cast
Disease Rating: 3
Loc.: NE (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot
Syn.: *Fomes annosus* (Fr.) P. Karsten
Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers
Disease Rating: 1
Loc.: C (1), SW (7)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot
Syn.: *Polyporus tomentosus* Fr.
Disease Rating: 1
Loc.: AL (1)

Lachnellula agassizii (Berk. & M.A. Curtis) Dennis: lachnellula dieback
Syn.: *Dasycyphus agassizii* (Berk. & M.A. Curtis) Sacc.
Disease Rating: 3
Loc.: NE (2)

Leucostoma kunzei (Fr.) Munk: cytospora canker
Anamorph: *Cytospora kunzei* Sacc.
Disease Rating: 2
Loc.: NC (1), NE (1), E (1), C (3), SW (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Loc.: NE (2), SW (1)

***Pinus strobus* L., eastern white pine**

Lophodermium sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Loc.: NW (1), N (4), NE (5), AL (2), E (2), SW (1)

Lophodermium nitens Darker: needle cast
Disease Rating: 2
Loc.: NC (1), N (2), NE (1), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: NC (1), NE (1), AL (1), E (1)

Lophophacidium dooksii Corlett & R. Shoem.: needle blight
Disease Rating: 2
Loc.: NW (1), NE (12), AL (1), C (1)

Meloderma desmazierii (Duby) Darker: needle cast
Syn.: *Hypoderma desmazierii* Duby
Anamorph: *Leptostroma strobicola* Hilitz.
Disease Rating: 3
Loc.: NC (1), N (1), AL (2)

Nectria sp.: nectria canker
Disease Rating: 3
Loc.: E (1)

Phaeolus schweinitzii (Fr.) Pat.: brown cubical rot
Syn.: *Polyporus schweinitzii* Fr.
Disease Rating: 1
Loc.: AL (1), C (2), SW (2)

Potebniamyces coniferarum (Hahn) Smerlis: needle blight
Anamorph: *Phacidiopycnis pseudotsugae* (M. Wilson) Hahn
Disease Rating: 3
Loc.: NE (1), E (1), SW (2)

Retinocyclus abietis (Crouan) Groves & Wells: leader dieback
Disease Rating: 3
Loc.: AL (1)

Rhizina undulata Fr.: tea pot fungus
Syn.: *Rhizina inflata* P. Karsten
Disease Rating: 3
Loc.: C (3)

***Pinus strobus* L., eastern white pine**

Scoleconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel
Disease Rating: 3
Loc.: NW (6), NC (6), N (14), NE (5), AL (11), E (2), C (11), SW (2)

Scytinostroma galactinum (Fr.) Donk: white stringy rot
Syn.: *Corticium galactinum* (Fr.) Burt
Disease Rating: 2
Loc.: NE (1)

Sirococcus conigenus (DC.) P. Cannon & Minter: shoot blight
Syn.: *Sirococcus strobilinus* Preuss
Disease Rating: 2
Loc.: NW (2)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: E (1), SW (1)

Stagonospora sp.: needle spot
Disease Rating: 3
Loc.: NE (2)

Stereum sp.: stem decay
Disease Rating: 2
Loc.: NE (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel
Disease Rating: 2
Loc.: NE (1), AL (1), E (3), C (3), SW (1)

Tympanis sp.: tympanis canker
Disease Rating: 3
Loc.: NE (3), C (1), SW (2)

Tympanis hypopodia Nyl.: tympanis canker
Syn.: *Tympanis piceina* Groves
Disease Rating: 3
Loc.: N (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker
Disease Rating: 3
Loc.: NC (1), N (2), AL (1), C (1)

***Pinus strobus* L., eastern white pine**

Verticicladiella sp.: black root stain
Disease Rating: 1
Loc.: AL (1)

Verticicladiella procera Kendr.: black root stain
Disease Rating: 1
Loc.: NE (1), E (1)

***Pinus sylvestris* L., Scots pine**

Armillaria mellea (Vahl.:Fr.) Kummer[8]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Loc.: NW (1), NE (5), E (3), C (4)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Loc.: N (5), NE (6), AL (4), E (1)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold
Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel
Anamorph: *Botrytis cinerea* Pers.:Fr.
Disease Rating: 1
Loc.: C (4), SW (2)

Capnodium sp.: sooty mold
Disease Rating: 3
Loc.: AL (1), E (3)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Loc.: NC (1), N (1), NE (2), AL (7), E (3), C (30), SW (3)

Ceratocystis sp.: blue stain
Disease Rating: 2
Loc.: NE (1)

Climacocystis borealis (Fr.) Kotl. & Pouzar: white mottled rot
Syn.: *Polyporus borealis* Fr.
Syn.: *Tyromyces borealis* (Fr.) Imaz.
Disease Rating: 2
Loc.: C (1)

Coleosporium asterum (Dietel) Sydow: pine needle rust
Syn.: *Coleosporium solidaginis* Thüm.
Disease Rating: 2
Loc.: E (1)

Cronartium sp.: stem rust
Disease Rating: 1
Loc.: E (1), C (2)

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8. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.) Herink.

***Pinus sylvestris* L., Scots pine**

Cronartium coleosporioides Arthur f. sp. *coleosporioides*: orange stalactiform blister rust
Disease Rating: 1
Loc.: NE (1)

Cronartium comandrae Peck: comandra blister rust
Disease Rating: 1
Loc.: NC (1)

Cronartium comptoniae Arthur: sweet fern blister rust
Disease Rating: 1
Loc.: NE (1)

Cronartium quercuum (Berk.) Miyabe ex Shirai f. sp. *banksianae*: eastern gall rust
Disease Rating: 2
Loc.: NW (2), NE (3), AL (1), E (2), SW (7)

Cyclaneusma sp.: needle cast
Syn.: *Naemacyclus* sp.
Disease Rating: 2
Loc.: NE (4), AL (1), E (1), C (4)

Cyclaneusma minus (Butin) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus minor* Butin
Disease Rating: 2
Loc.: NE (1), AL (1), E (1), C (2)

Cyclaneusma niveum (Pers.:Fr.) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus niveus* (Pers.:Fr.) Fuckel ex Sacc.
Disease Rating: 3
Loc.: NE (1), AL (2), C (3)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot
Disease Rating: 1
Loc.: E (1)

Cytospora sp.: cytospora canker
Disease Rating: 3
Loc.: NE (1)

Dermea balsamea (Peck) Seaver: dermea twig canker
Syn.: *Gelatinosporium abietinum* Peck
Anamorph: *Foveostroma abietinum* (Peck) DiCosmo
Disease Rating: 3
Loc.: NE (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust
Syn.: *Peridermium harknessii* J.P. Moore
Disease Rating: 2
Loc.: NW (1), N (1), NE (17), AL (10), E (8), C (10), SW (6)

***Pinus sylvestris* L., Scots pine**

Haematostereum sanguinolentum (Alb. & Schwein.:Fr.) Pouzar: red heart rot
Syn.: *Stereum sanguinolentum* (Alb. & Schwein.:Fr.) Fr.
Disease Rating: 2
Loc.: E (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot
Syn.: *Fomes annosus* (Fr.) P. Karsten
Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers
Disease Rating: 1
Loc.: C (1), SW (4)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot
Syn.: *Polyporus tomentosus* Fr.
Disease Rating: 1
Loc.: SW (1)

Leucostoma sp.: canker
Disease Rating: 3
Loc.: NW (1)

Leucostoma kunzei (Fr.) Munk: cytospora canker
Anamorph: *Cytospora kunzei* Sacc.
Disease Rating: 2
Loc.: NW (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Loc.: NE (1), C (1)

Lophodermium sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Loc.: AL (2), E (2), C (3), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Loc.: NC (1), NE (1), C (3)

Paxillus atrotomentosus (Batsch:Fr.) Fr.: velvet-footed paxillus
Disease Rating: 4
Loc.: AL (1)

Pestalotia sp.: needle and shoot blight
Disease Rating: 4
Loc.: E (1), C (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight
Disease Rating: 3
Loc.: SW (1)

***Pinus sylvestris* L., Scots pine**

Sclerophoma sp.: sclerophoma dieback
Disease Rating: 3
Loc.: E (1)

Scoleconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel
Disease Rating: 3
Loc.: NW (2), NC (1), N (4), NE (1), E (1), C (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Loc.: NE (1), AL (3), E (7), C (46), SW (8)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel
Disease Rating: 2
Loc.: NW (1), AL (2), E (3), C (2)

Thelephora terrestris Ehrh.:Fr.: smothering disease
Disease Rating: 4M
Loc.: AL (1)

Therrya fuckelii (Rehm) Kujala: therrya canker
Disease Rating: 3
Loc.: AL (1)

Tricaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot
Syn.: *Polyporus abietinus* Pers.:Fr.
Disease Rating: 4
Loc.: C (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker
Disease Rating: 3
Loc.: NW (1), NC (2), NE (1), AL (1)

FUNGUS/HOST LISTING

Arceuthobium americanum Nutt. ex Engel.[9]: dwarf mistletoe
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc: NW (3)

Arceuthobium pusillum Peck[9]: eastern dwarf mistletoe
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (2)

Armillaria mellea (Vahl:Fr.) Kummer[10]: armillaria root rot
Syn.: *Armillariella mellea* (Vahl:Fr.) P. Karsten
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW(54), NC (109), N (146), NE (54), AL (10), E (6), C (3)
Host: *Pinus contorta* Dougl.
Loc.: NC (2)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: NC (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (16), NC (8), N (8), NE (40), AL (32), E (12), C (47)
SW (4)
Host: *Pinus strobus* L.
Loc.: NC (1), N (5), NE (9), AL (19), E (2), C (3), SW (4)
Host: *Pinus sylvestris* L.
Loc.: NW (1), NE (5), E (3), C (4)

Armillaria ponderosa (Peck) Sacc.: white matsutake root rot
Disease Rating: 3M
Host: *Pinus banksiana* Lamb.
Loc.: NE (1)

Ascocalyx abietina (Lagerb.) Schläpfer-Bernhard: scleroderris canker
Syn.: *Gremmeniella abietina* (Lagerb.) Morelet
Syn.: *Scleroderris lagerbergii* Gremmen
Anamorph: *Brunchorstia pinea* (P. Karsten) Höhnel
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (49), NC (176), N (124), NE (70), AL (6)
Host: *Pinus contorta* Dougl.
Loc.: NC (5)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: E (1)
Host: *Pinus nigra* Arnold
Loc.: NE (2), AL (4), E (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (14), NC (31), N (75), NE (105), AL (77), C (1)
Host: *Pinus strobus* L.
Loc.: NC (4), N (2), NE (7)
Host: *Pinus sylvestris* L.
Loc.: N (5), NE (6), AL (4), E (1)

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9. *Arceuthobium americanum* and *A. pusillum* are parasitic phanerogams, not fungi.
10. Recent taxonomy has indicated that most collections of *Armillaria* made in Ontario are actually *A. ostoyae* (Romagn.).

Ascocoryne sarcoides (Jacq.:Fr.) J.W. Groves & D. Wilson: pink stain
Syn.: *Coryne sarcoides* (Jacq.:Fr.) Tul.
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (2), N (1), NE (2)
Host: *Pinus resinosa* Ait.
Loc.: AL (2), E (1)

Ascochyta sp.: needle spot
Disease Rating: 5
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Biatorella resinae (Ehrenb.:Fr.) Mudd: resin cup fungus
Anamorph: *Zythia resinae* (Ehrenb.:Fr.) P. Karsten
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: N (1), NE (1)
Host: *Pinus strobus* L.
Loc.: NE (1)

Bifusella sp.: needle cast
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: AL (1)

Bifusella linearis (Peck) Höhnel: needle cast
Syn.: *Hypoderma lineare* (Peck) Thüm.
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: NE (2)

Botryotinia fuckeliana (de Bary) Whetzel: gray mold
Syn.: *Sclerotinia fuckeliana* (de Bary) Fuckel
Anamorph: *Botrytis cinerea* Pers.:Fr.
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: SW (1)
Host: *Pinus resinosa* Ait.
Loc.: N (1), NE (3), C (1)
Host: *Pinus strobus* L.
Loc.: E (1)
Host: *Pinus sylvestris* L.
Loc.: C (4), SW (2)

Caliciopsis pinea Peck: caliciopsis canker
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: SW (1)
Host *Pinus strobus* L.
Loc.: C (1)

Camarosporium sp.: camarosporium canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (1), NE (1)
Host: *Pinus strobus* L.
Loc.: NE (1)

Capnodium sp.: sooty mold
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (4), NE (2)
Host: *Pinus strobus* L.
Loc.: AL (1), E (1), C (1)
Host: *Pinus sylvestris* L.
Loc.: AL (1), E (3)

Capnodium pini Berk. & M.A. Curtis: sooty mold
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: E (1)

Cenangium acuum Cooke & Peck: twig blight
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), SW (1)
Host: *Pinus nigra* Arnold
Loc.: C (1)
Host: *Pinus resinosa* Ait.
Loc.: NC (1), NE (1), C (1)
Host: *Pinus strobus* L.
Loc.: NE (3), C (3), SW (1)

Cenangium atropurpureum Cash & Davidson: twig blight
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (1), NE (1)

Cenangium ferruginosum Fr.:Fr.: twig blight
Syn.: *Cenangium abietis* (Pers.) Rehm
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (5), NC (6), N (6), NE (9), AL (6), C (1)
Host: *Pinus contorta* Dougl.
Loc.: NC (5)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: C (1)
Host: *Pinus nigra* Arnold
Loc.: E (1), C (3)
Host: *Pinus resinosa* Ait.
Loc.: NW (4), NC (4), NE (1), AL (8), E (15), C (7), SW (2)
Host: *Pinus strobus* L.
Loc.: NC (1), NE (1), E (1), C (2), SW (1)

(cont'd)

Cenangium ferruginosum Fr.:Fr.: twig blight (concl.)
Host: *Pinus sylvestris* L.
Loc.: NC (1), N (1), NE (2), AL (7), E (3), C (30), SW (3)

Cephalosporium sp.: cephalosporium wilt
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (2), N (3), AL (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (1), AL (2), E (1), C (4)
Host: *Pinus strobus* L.
Loc.: E (2), SW (1)

Ceratocystis sp.: blue stain
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), N (2), NE (1), AL (1)
Host: *Pinus resinosa* Ait.
Loc.: NE (1), C (1), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NE (1)

Chaetomium sp.: chaetomium
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (4), N (3), NE (2)

Chaetomium globosum Kunze:Fr.: olive-green mold
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Cladosporium sp.: needle spot
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (1), SW (1)

Cladosporium variabile (Cooke) de Vries: needle blight
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: SW (1)

Climacocystis borealis (Fr.) Kotl. & Pouzar: white mottled rot
Syn.: *Polyporus borealis* Fr.
Syn.: *Tyromyces borealis* (Fr.) Imaz.
Disease Rating: 2
Host: *Pinus sylvestris* L.
Loc.: C (1)

Coccomyces strobi J. Reid & Cain: coccomyces canker
Disease Rating: 2
Host: *Pinus resinosa* Ait.
Loc.: NE (1), E (2)
Host: *Pinus strobus* L.
Loc.: NE (2), E (1), C (1), SW (3)

Coleosporium sp.: pine needle rust
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Coleosporium asterum (Dietel) Sydow: pine needle rust
Syn.: *Coleosporium solidaginis* Thüm.
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (50), NC (51), N (88), NE (27), AL (2), E (12), C (6), SW (2)
Host: *Pinus contorta* Dougl.
Loc.: NC (7)
Host: *Pinus resinosa* Ait.
Loc.: NW (9), NC (1), NE (5), AL (33), E (43), C (38), SW (24)
Host: *Pinus sylvestris* L.
Loc.: E (1)

Coleosporium viburni Arthur: pine needle rust
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: N (2)

Coltricia cinnamomea (Pers.) Murrill: shiny cinnamon polypore
Syn.: *Polyporus cinnamomeus* Pers.
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: NE (1)

Coltricia perennis (Fr.) Murrill: perennis polypore
Syn.: *Polyporus perennis* L.:Fr.
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: SW (1)

Coniochaeta sp.: coniochaeta
Disease Rating: 4
Host: *Pinus nigra* Arnold
Loc.: C (1)
Pinus resinosa Ait.
Loc.: NE (1)

Coniophora puteana (Schumacher:Fr.) P. Karsten: brown cubical rot
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: N (1), NE (1)

Coriolus versicolor (L.:Fr.) Quélet: turkeytail
Syn.: *Polyporus versicolor* L.:Fr.
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: SW (1)

Corticium sp.: white spongy rot
Disease Rating: 2
Host: *Pinus resinosa* Ait.
Loc.: AL (1)

Cronartium sp.: stem rust
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (10), NC (8), N (20), NE (4), AL (1)
Host: *Pinus contorta* Dougl.
Loc.: NC (5), N (1)
Host: *Pinus ponderosa* Laws.
Loc.: NE (1)
Host: *Pinus sylvestris* L.
Loc.: E (1), C (2)

Cronartium coleosporioides Arthur f. sp. *coleosporioides*: orange stalactiform blister rust
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (12), N (5), NE (5)
Host: *Pinus sylvestris* L.
Loc.: NE (1)

Cronartium comandrae Peck: comandra blister rust
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (12), NC (8), N (3), E (1)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: AL (1)
Host: *Pinus sylvestris* L.
Loc.: NC (1)

Cronartium comptoniae Arthur: sweet fern blister rust
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (25), NC (35), N (95), NE (46), AL (11), E (2), SW (1)
Host: *Pinus contorta* Dougl.
Loc.: NC (4), N (2)
Host: *Pinus sylvestris* L.
Loc.: NE (1)

Cronartium quercuum (Berk.) Miyabe ex Shirai f. sp. *banksianae*: eastern gall rust
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (3), NC (2), N (4), NE (12), AL (1), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NW (2), NE (3), AL (1), E (2), SW (7)

Cronartium ribicola J.C. Fischer: white pine blister rust
Disease Rating: 1
Host: *Pinus strobus* L.
Loc.: NW (25), NC (22), N (29), NE (117), AL (53), E (36), C (32), SW (25)

Cryptoporus volvatus (Peck) Hubbard: trunk rot
Syn.: *Polyporus volvatus* Peck
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: E (2)
Host: *Pinus resinosa* Ait.
Loc.: AL (2), E (4), C (1)

Cyclaneusma sp.: needle cast
Syn.: *Naemacyclus* sp.
Disease Rating: 2
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: SW (2)
Host: *Pinus sylvestris* L.
Loc.: NE (4), AL (1), E (1), C (4)

Cyclaneusma minus (Butin) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus minor* Butin
Disease Rating: 2
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: SW (1)
Host: *Pinus sylvestris* L.
Loc.: NE (1), AL (1), E (1), C (2)

Cyclaneusma niveum (Pers.:Fr.) DiCosmo, Peredo & Minter: needle cast
Syn.: *Naemacyclus niveus* (Pers.:Fr.) Fuckel ex Sacc.
Disease Rating: 3
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: E (1), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NE (1), AL (2), C (3)

Cylindrocladium floridanum Sob. & C.P. Seym.: cylindrocladium root rot
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)
Host: *Pinus resinosa* Ait.
Loc.: E (1)
Host: *Pinus sylvestris* L.
Loc.: E (1)

Cytospora sp.: cytospora canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (1), N (3), NE (2)

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Cytospora sp.: cytospora canker (concl.)
Host: *Pinus nigra* Arnold
Loc.: NE (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (2), NC (1), N (3), NE (2), AL (3), E (5), C (1)
Host: *Pinus strobus* L.
Loc.: NE (4), AL (1), E (2), C (2), SW (4)
Host: *Pinus sylvestris* L.
Loc.: NE (1)

Cytospora pini Desm.: cytospora canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (2), N (2), NE (1)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: NE (1)
Host: *Pinus nigra* Arnold
Loc.: C (1)
Host: *Pinus resinosa* Ait.
Loc.: NE (1), AL (2)
Host: *Pinus strobus* L.
Loc.: NC (1), NE (4), AL (2), E (1), SW (3)

Cytosporella sp.: shoot blight
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (1), NE (1)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: NW (1)
Host: *Pinus resinosa* Ait.
Loc.: NC (1), N (1), E (1)

Cytosporina sp.: twig canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (2), N (1)
Pinus resinosa Ait.
Loc.: AL (4), SW (1)
Pinus strobus L.
Loc.: NE (1)

Dasyscyphus sp.: dasyscyphus canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (2)

Dasyscyphus acuum (Alb. & Schwein.) Sacc.: needle dasyscyphus
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Davisomycella sp.: tar spot needle cast
Syn.: *Hypodermella* sp.
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (2), NE (1)

Davisomycella ampla (J. Davis) Darker: tar spot needle cast
Syn.: *Hypodermella ampla* (J. Davis) Dearn.
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (32), NC (58), N (97), NE (64), AL (37), E (4)

Dendrophoma sp.: dendrophoma
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NC (2)

Dermea sp.: dermea canker
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: AL (1)

Dermea balsamea (Peck) Seaver: dermea twig canker
Syn.: *Gelatinosporium abietinum* Peck
Anamorph: *Foveostroma abietinum* (Peck) DiCosmo
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: NE (4), AL (1)
Host: *Pinus sylvestris* L.
Loc.: NE (1)

Dichomitus squalens (P. Karsten) Reid: red ray rot
Syn.: *Polyporus anceps* Peck
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Dothiorella sp.: dothiorella canker and dieback
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: NW (1)

Elytroderma deformans (Weir) Darker: needle cast
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), N (1)

Endocronartium sp.: western gall rust
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Endocronartium harknessii (J.P. Moore) Y. Hirats.: western gall rust
Syn.: *Peridermium harknessii* J.P. Moore
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (184), NC (107), N (113), NE (54), AL (14), E (4), C (1), SW (1)
Host: *Pinus contorta* Dougl.
Loc.: NC (2), N (1)
Host: *Pinus nigra* Arnold
Loc.: NW (1), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NW (1), N (1), NE (17), AL (10), E (8), C (10), SW (6)

Epicoccum purpurascens Ehrenb. ex Schlecht.: epicoccum
Disease Rating: 3
Host: *Pinus contorta* Dougl.
Loc.: C (1)
Host: *Pinus resinosa* Ait.
Loc.: C (1)
Host: *Pinus strobus* L.
Loc.: NE (4), AL (1), SW (1)

Fomitopsis pinicola (Swartz:Fr.) P. Karsten: brown crumbly rot
Syn.: *Fomes pinicola* (Swartz:Fr.) Cooke
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (1), N (2), NE (1)

Fusicoccum sp.: needle blight
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: SW (2)

Ganoderma tsugae Murrill: white spongy rot
Disease Rating: 2
Host: *Pinus resinosa* Ait.
Loc.: C (1)

Gelatinosporium sp.: stem canker
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: NE (1)
Host: *Pinus strobus* L.
Loc.: NW (1), NE (1)

Gliocladium roseum (Link) Bainier: gliocladium stain
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), N (1)

Gloeophyllum odoratum (Fr.) Imaz.: brown cubical rot
Syn.: *Polyporus odoratus* Wolfen:Fr.
Syn.: *Trametes americana* Overh.
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: AL (1)

Gloeophyllum sepiarium (Wulfen:Fr.) P. Karsten: brown cubical rot
Syn.: *Lenzites saepiaria* (Wulfen:Fr.) Fr.
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NE (1)
Host: *Pinus strobus* L.
Loc.: E (1)

Haematostereum sanguinolentum (Alb. & Schwein.:Fr.) Pouzar: red heart rot
Syn.: *Stereum sanguinolentum* (Alb. & Schwein.:Fr.) Fr.
Disease Rating: 2
Host: *Pinus sylvestris* L.
Loc.: E (1)

Hendersonia sp.: needle blight
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), N (4), NE (1), AL (3)
Host: *Pinus strobus* L.
Loc.: NE (1)

Hendersonia pinicola Wehm.: needle cast
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (2), AL (1)
Host: *Pinus strobus* L.
Loc.: NE (1)

Heterobasidion annosum (Fr.) Bref.: fomes root rot
Syn.: *Fomes annosus* (Fr.) P. Karsten
Anamorph: *Spiniger meineckellus* (A. Olson) Stalpers
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: C (12), SW (2)
Host: *Pinus resinosa* Ait.
Loc.: E (17), C (27), SW (13)
Host: *Pinus strobus* L.
Loc.: C (1), SW (7)
Host: *Pinus sylvestris* L.
Loc.: C (1), SW (4)

Hormiscium sp.: hormiscium
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: NW (2), NC (2), N (2), NE (7)

Hormodendrum sp.: wood stain
Disease Rating: 4
Host: *Pinus contorta* Dougl.
Loc.: C (1)

Hydnellum aurantiacum (Batsch:Fr.) P. Karsten: hydnellum
Syn.: *Hydnum aurantiacum* Alb. & Schwein.
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: AL (1)

Hypodermella sp.: needle cast
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (1)

Inonotus circinatus (Fr.) Gilbertson: circinatus root rot
Syn.: *Polyporus circinatus* Fr.
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: N (1)

Inonotus tomentosus (Fr.) Teng: tomentosus root rot
Syn.: *Polyporus tomentosus* Fr.
Disease Rating: 1
Host: *Pinus resinosa* Ait.
Loc.: SW (2)
Host: *Pinus strobus* L.
Loc.: AL (1)
Host: *Pinus sylvestris* L.
Loc.: SW (1)

Junghuhnia collabens (Fr.) Ryv.: white pitted rot
Syn.: *Polyporus collabens* Fr.
Syn.: *Poria rixosa* (P. Karsten) P. Karsten
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)

Lachnellula sp.: lachnellula dieback
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NE (1)

Lachnellula agassizii (Berk. & M.A. Curtis) Dennis: lachnellula dieback
Syn.: *Dasyscyphus agassizii* (Berk. & M.A. Curtis) Sacc.
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (2), N (1)
Host: *Pinus strobus* L.
Loc.: NE (2)

Lachnellula chrysophthalma (Pers.) P. Karsten: lachnellula dieback
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)
Host: *Pinus contorta* Dougl.
Loc.: NC (1)

Leucostoma sp.: canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (1)
Host: *Pinus resinosa* Ait.
Loc.: N (1), E (2)
Host: *Pinus sylvestris* L.
Loc.: NW (1)

Leucostoma kunzei (Fr.) Munk: cytospora canker
Anamorph: *Cytospora kunzei* Sacc.
Disease Rating: 2
Host: *Pinus resinosa* Ait.
Loc.: AL (1)
Host: *Pinus strobus* L.
Loc.: NC (1), NE (1), E (1), C (3), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NW (1)

Lophium sp.: mussel shell fungus
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: N (1)

Lophium mytilinum (Pers.) Fr.: mussel shell fungus
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (8), NC (2), N (5), NE (1)
Host: *Pinus nigra* Arnold
Loc.: AL (1)
Host: *Pinus ponderosa* Laws.
Loc.: NE (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (3), NC (1), N (1), NE (3), AL (3)
Host: *Pinus strobus* L.
Loc.: NE (2), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NE (1), C (1)

Lophodermella sp.: needle cast
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NE (2)

Lophodermella concolor (Dearn.) Darker: needle cast
Syn.: *Hypodermella concolor* (Dearn.) Darker
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (1), N (1), NE (1), AL (2)

Lophodermium sp.: needle cast
Anamorph: *Leptostroma* sp.
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (5), NC (23), N (38), NE (15), AL (3), C (2), SW (2)
Host: *Pinus nigra* Arnold
Loc.: AL (1), E (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (7), NC (4), N (6), NE (56), AL (26), E (20), C (10), SW (2)
Host: *Pinus strobus* L.
Loc.: NW (1), N (4), NE (5), AL (2), E (2), SW (1)
Host: *Pinus sylvestris* L.
Loc.: AL (2), E (2), C (3), SW (1)

Lophodermium nitens Darker: needle cast
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (1), N (5), NE (1), E (1)
Host: *Pinus resinosa* Ait.
Loc.: NC (2), N (1), E (1), SW (1)
Host: *Pinus strobus* L.
Loc.: NC (1), N (2), NE (1), SW (1)

Lophodermium pinastri (Schrader:Fr.) Chev.: needle cast
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (5), NC (8), N (23), NE (6), AL (2), E (1)
Host: *Pinus contorta* Dougl.
Loc.: SW (1)
Host: *Pinus nigra* Arnold
Loc.: AL (1), E (1), C (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (9), NC (8), N (7), NE (16), AL (28), E (1), C (6), SW (2)
Host: *Pinus strobus* L.
Loc.: NC (1), NE (1), AL (1), E (1)
Host: *Pinus sylvestris* L.
Loc.: NC (1), NE (1), C (3)

Lophodermium seditiosum Minter, Staley & Millar: needle cast
Anamorph: *Leptostroma austriacum* Oud.
Anamorph: *Leptostroma rostrupii* Minter
Disease Rating: 1
Host: *Pinus resinosa* Ait.
Loc.: N (1), NE (2), E (5)

Lophophacidium dooksii Corlett & R. Shoem.: needle blight
Disease Rating: 2
Host: *Pinus strobus* L.
Loc.: NW (1), NE (12), AL (1), C (1)

Meloderma desmazierii (Duby) Darker: needle cast
Syn.: *Hypoderma desmazierii* Duby
Anamorph: *Leptostroma strobicola* Hilitz.
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: NC (1), N (1), AL (2)

Mycosphaerella dearnessii Barr: brown spot needle blight
Syn.: *Scirrhia acicola* (Dearn.) Siggers
Anamorph: *Lecanosticta acicola* (Thüm.) H. Sydow
Disease Rating: 2
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: AL (1), E (1), SW (5)
Host: *Pinus nigra* Arnold
Loc.: C (1), SW (2)

Mycosphaerella pini Rostrup: red band disease
Syn.: *Scirrhia pini* Funk & Parker
Anamorph: *Dothistroma septospora* (Dorog.) Morelet var. *septospora*
Disease Rating: 2
Host: *Pinus contorta* Dougl.
Loc.: SW (1)
Host: *Pinus nigra* Arnold
Loc.: E (3), C (10), SW (5)

Nectria sp.: nectria canker
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: NC (1)
Host: *Pinus strobus* L.
Loc.: E (1)

Oligoporus guttulatus (Peck) Gilbertson & Ryv.: brown cubical rot
Syn.: *Polyporus guttulatus* (Peck) Gilbertson & Ryv.
Syn.: *Tyromyces guttulatus* (Peck) Murrill
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: SW (1)

Oligoporus sericeomollis (Romell) Pouzar: brown cubical rot
Syn.: *Polyporus sericeomollis* Romell
Syn.: *Poria sericeomollis* (Romell) Egel.
Syn.: *Tyromyces sericeomollis* (Romell) Bondartsev & Singer.
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)

Paxillus atrotomentosus (Batsch:Fr.) Fr.: velvet-footed paxillus
Disease Rating: 4
Host: *Pinus sylvestris* L.
Loc.: AL (1)

Peniophora sp.: sap rot
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: AL (1)

Pestalotia sp.: needle and shoot blight
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: E (1)
Host: *Pinus contorta* Dougl.
Loc.: C (1)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: C (1)
Host: *Pinus nigra* Arnold
Loc.: C (1), SW (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (2), N (1), C (3)
Host: *Pinus sylvestris* L.
Loc.: E (1), C (1)

Pezicula livida (Berk. & Broome) Rehm: pezicula dieback
Anamorph: *Cryptosporiopsis abietina* Petrak
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)

Phaeolus schweinitzii (Fr.) Pat.: brown cubical rot
Syn.: *Polyporus schweinitzii* Fr.
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)
Host: *Pinus strobus* L.
Loc.: AL (1), C (2), SW (2)

Phellinus ferruginosus (Schrader:Fr.) Pat.: white spongy rot
Syn.: *Poria ferruginosa* (Schrader:Fr.) P. Karsten
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot
Syn.: *Fomes pini* (Thore:Fr.) P. Karsten
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (2), NC (2), NE (1)

(cont'd)

Phellinus pini (Brot.:Fr.) A. Ames: red ring rot (concl.)
Host: *Pinus resinosa* Ait.
Loc.: NC (1), NE (2), C (1)

Phellinus viticola (Schwein.) Donk: grape white rot
Syn.: *Fomes viticola* (Schwein.) Lowe
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)

Phoma sp.: needle blight
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: NW (6), NC (1), NE (2), E (1), C (1)

Phoma glomerata (Corda) Wollenw. & Hochapf.: seedling needle blight
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NC (5), N (1), E (1)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: C (1)
Host: *Pinus sylvestris* L.
Loc.: SW (1)

Phomopsis sp.: phomopsis canker
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: NW (1), N (1), NE (2)

Poria subacida (Peck) Sacc.: white stringy rot
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)

Potebniamyces coniferarum (Hahn) Smerlis: needle blight
Anamorph: *Phacidiopycnis pseudotsugae* (M. Wilson) Hahn
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: NE (1), E (1), SW (2)

Retinocyclus sp.: retinocyclus dieback
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (1)

Retinocyclus abietis (Crouan) Groves & Wells: leader dieback
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: AL (1)

Rhizina undulata Fr.: tea pot fungus
Syn.: *Rhizina inflata* P. Karsten
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (3)
Host: *Pinus resinosa* Ait.
Loc.: C (2)
Host: *Pinus strobus* L.
Loc.: C (3)

Rosellinia sp.: felt blight
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NC (1)

Rosellinia thelena (Fr.) Rabenh.: pine bark rosellinia
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NC (1), N (1), NE (1)

Sclerophoma sp.: sclerophoma dieback
Disease Rating: 3
Host: *Pinus sylvestris* L.
Loc.: E (1)

Scoleconectria cucurbitula (Tode:Fr.) C. Booth: canker and dieback
Syn.: *Ophionectria cylindrospora* (Sollm.) Berl. & Vogl.
Anamorph: *Zythiostroma pinastri* (P. Karsten) Höhnel
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (7), NC (26), N (20), NE (93), AL (2), E (1), C (1)
Host: *Pinus contorta* Dougl.
Loc.: NC (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (1), NC (6), N (4), NE (6), AL (9), E (9), C (2), SW (1)
Host: *Pinus strobus* L.
Loc.: NW (6) NC (6), N (14), NE (5), AL (11), E (2), C (11), SW (2)
Host: *Pinus sylvestris* L.
Loc.: NW (2), NC (1), N (4), NE (1), E (1), C (1)

Scytinostroma galactinum (Fr.) Donk: yellow stringy rot
Syn.: *Corticium galactinum* (Fr.) Burt
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (1), NE (1)
Host: *Pinus resinosa* Ait.
Loc.: AL (1)
Host: *Pinus strobus* L.
Loc.: NE (1)

Septoria sp.: needle spot
Disease Rating: 3
Host: *Pinus nigra* Arnold
Loc.: N (1), AL (1)

Sirococcus conigenus (DC.) P. Cannon & Minter: shoot blight
Syn.: *Sirococcus strobilinus* Preuss
Disease Rating: 2
Host: *Pinus resinosa* Ait.
Loc.: NW (40), NC (20), N (5), NE (23), AL (2)
Host: *Pinus strobus* L.
Loc.: NW (2)

Sistotrema brinkmannii (Bresad.) John Eriksson: white stringy rot
Syn.: *Trechispora brinkmannii* (Bresad.) Rogers and Jacks.
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NE (1)

Sphaeropsis sapinea (Fr.) Dyko & B. Sutton: diplodia tip blight
Syn.: *Diplodia pinea* (Desm.) Kickx
Disease Rating: 1
Host: *Pinus banksiana* Lamb.
Loc.: NC (1), AL (1), C (1)
Host.: *Pinus nigra* Arnold
Loc.: AL (1), E (9), C (14), SW (11)
Host: *Pinus ponderosa* Laws.
Loc.: C (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (3), NC (2), NE (2), AL (4), E (7), C (8), SW (7)
Host: *Pinus strobus* L.
Loc.: E (1), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NE (1), AL (3), E (7), C (46), SW (8)

Sporonema sp.: needle spot
Disease Rating: 4
Host: *Pinus resinosa* Ait.
Loc.: E (1)

Stagonospora sp.: needle spot
Disease Rating: 3
Host: *Pinus strobus* L.
Loc.: NE (2)

Stereum sp.: stem decay
Disease Rating: 2
Host: *Pinus strobus* L.
Loc.: NE (1)

Sydowia polyspora (Bref. & Tav.) E. Müller: needle blight
Anamorph: *Sclerophoma pythiophila* (Corda) Höhnel
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: N (1), NE (1), AL (1), E (1)
Host: *Pinus mugo* Turra var. *mughus* Zenari
Loc.: NW (1), SW (2)
Host: *Pinus resinosa* Ait.
Loc.: NW (1), N (3), NE (12), AL (4), E (5)
Host: *Pinus strobus* L.
Loc.: NE (1), AL (1), E (3), C (3), SW (1)
Host: *Pinus sylvestris* L.
Loc.: NW (1), AL (2), E (3), C (2)

Thelephora terrestris Ehrh.:Fr.: smothering disease
Disease Rating: 4M
Host: *Pinus banksiana* Lamb.
Loc.: N (1), SW (1)
Host: *Pinus resinosa* Ait.
Loc.: AL (1), E (2)
Host: *Pinus sylvestris* L.
Loc.: AL (1)

Therrya fuckelii (Rehm) Kujala: therrya canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (1)
Host: *Pinus resinosa* Ait.
Loc.: AL (1), E (4), C (4)
Host: *Pinus sylvestris* L.
Loc.: AL (1)

Trichaptum abietinus (Pers.:Fr.) Ryv.: pitted sap rot
Syn.: *Polyporus abietinus* Pers.:Fr.
Disease Rating: 4
Host: *Pinus banksiana* Lamb.
Loc.: NW (2), NE (1)
Host: *Pinus resinosa* Ait.
Loc.: E (1), C (1)
Host: *Pinus sylvestris* L.
Loc.: C (1)

Tympanis sp.: tympanis canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (2), NC (1), N (4), NE (2)
Host: *Pinus resinosa* Ait.
Loc.: NW (1), NC (2), N (1), NE (2), AL (12), E (6), C (2)
Host: *Pinus strobus* L.
Loc.: NE (3), C (1), SW (2)

Tympanis confusa Nyl.: tympanis canker
Disease Rating: 3
Host: *Pinus nigra* Arnold
Loc.: C (1)

Tympanis hypopodia Nyl.: tympanis canker
Syn.: *Tympanis piceina* Groves
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (4), NE (1)
Host: *Pinus strobus* L.
Loc.: N (1)

Tympanis truncatula (Pers.:Fr.) Rehm: tympanis dieback
Syn.: *Tympanis pinastri* Tul.
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: N (1)

Valsa sp.: cytospora canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NC (1), NE (1)
Host: *Pinus resinosa* Ait.
Loc.: NW (2), NE (2), AL (2), E (1)

Valsa pini Alb. & Schwein.:Fr.: cytospora canker
Disease Rating: 3
Host: *Pinus banksiana* Lamb.
Loc.: NW (3), NC (2), N (9)
Host: *Pinus resinosa*
Loc.: NW (3), NC (6), N (1), NE (6), AL (1), E (2)
Host: *Pinus strobus* L.
Loc.: NC (1), N (2), AL (1), C (1)
Host: *Pinus sylvestris* L.
Loc.: NW (1), NC (2), NE (1), AL (1)

Verticicladiella sp.: black root stain
Disease Rating: 1
Host: *Pinus resinosa* Ait.
Loc.: E (2)
Host: *Pinus strobus* L.
Loc.: AL (1)

Verticicladiella procera Kendr.: black root stain
Disease Rating: 1
Host: *Pinus strobus* L.
Loc.: NE (1), E (1)

Verticillium sp.: seedling root rot
Disease Rating: 3
Host: *Pinus resinosa* Ait.
Loc.: NE (1), C (1)

Wallrothiella arceuthobii (Peck) Sacc.: flower blight
Disease Rating: 2
Host: *Pinus banksiana* Lamb.
Loc.: NW (2) (on *Arceuthobium americanum* Nutt. ex Engel.)

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11. *Arceuthobium americana* and *A. pusillum* are parasitic phanerogams, not fungi.

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12. *Arceuthobium americanum* and *A. pusillum* are parasitic phanerogams, not fungi.

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